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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/596,686

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Norbert Deutloff

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EXAMINER

BOWES, STEPHEN M

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,686	Applicant(s) DEUTLOFF ET AL.	
	Examiner STEPHEN BOWES	Art Unit 3657	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 March 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 19, 21 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/2006, 10/2009</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Species II in the reply filed on 3/4/2010 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 17-18 and 20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the tension spring must be shown or the feature(s) canceled from the claim(s) 12 and 21. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

Art Unit: 3657

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 2-16, 19 and 21 are objected to because of the following informalities: In claims 2-16, 19 and 21, applicant claims "A setting device" where "The setting device" is appropriate. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-16, 19 and 21-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, applicant claims "a non-rotating axially movable connection". It is not clear from the drawing or specification what connection is being claimed.

Claim 2 is dependant upon itself. Claim dependency cannot be unitary. The claim has been treated as being dependant on claim 1 for the purposes of examination.

Regarding claims 1 and 22, the phrase "or similar" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by

Art Unit: 3657

"or similar"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

Regarding claim 4, the phrase "axial movement option" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 4 recites the limitation "the operational stroke distance" in line 9. There is insufficient antecedent basis for this limitation in the claim. The operational stroke distance of the elastic element is not defined in the antecedent claim, and the specification provides only a duplication of the claim language.

Regarding claims 6 and 7, the phrase "which can be" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Regarding claim 15, applicant claims "a motor vehicle parking brake" twice. It is unclear whether applicant is referring to the same parking brake or another, second, parking brake.

Regarding claim 21, applicant recites the limitation "the tension spring element constant" in the last line of the claim. There is insufficient antecedent basis for this limitation in the claim. There is no mention of a tension spring in the antecedent language or claim.

Regarding claim 22, applicant claims "at least elastic element". Although it appears that a numerical value was inadvertently omitted, it is unclear what minimum

Art Unit: 3657

aspect of the element is claimed. It has been presumed as “one” for the purposes of examination.

Regarding claim 22, applicant claims “a non-rotating axially advancable connection”. It is not clear from the drawing or specification what connection is being claimed.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-11, 13-15, 19 and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Arnold et al (US 5,180,038).

As per claim 1, Arnold et al discloses a setting device (Title) comprising a setting unit (Abstract; Fig. 1) featuring a remotely-operated drive (50), a telescopic device (8, 36; Col. 4, lines 3-8) movable axially in a housing (2) or similar in a longitudinal axis of the setting unit, containing a hollow shaft (8) and a spindle shaft (36) connected to it in a manner that enables it to rotate and advance and actuate a brake cable (20), a non-rotating axially movable connection (42a) between the remotely-operated drive and the hollow shaft, and an axial advancing support between the hollow shaft on the one side and the housing on the other side via at least one elastic element (30) stationary relative to the spindle shaft and the brake cable and arranged in parallel in the direction of hollow shaft loaded axially by the advancing support and thereby axially deformable.

As per claim 2, Arnold et al discloses a setting device according to claim [1], comprising an electric motor (50) for the remotely-operated drive.

As per claim 3, Arnold et al discloses a setting device according to claim 1, comprising a transmission (Col. 3, line 65 – Col. 4, line 3) between the remotely-operated drive and the hollow shaft.

As per claim 4, Arnold et al discloses a setting device according to claim 3, comprising an intermediate gear wheel (58) between a drive gear element (54) of the remotely-operated drive and a drive gear wheel (62) of the hollow shaft; and an axial movement option between the intermediate gear wheel and the meshing drive gear wheel of the hollow shaft at least to the extent of the operational stroke distance of the at least one elastic element (Fig. 1; The gears are capable of sliding axially under sufficient loading).

As per claim 5, Arnold et al discloses a setting device according to claim 1, wherein the at least one elastic element is used as a correspondingly axially moved force sensor emitter for its longitudinal deformation for the axial advancing force acting from the motorized drive via the hollow shaft on the spindle shaft (30).

As per claim 6, Arnold et al discloses a setting device according to claim 5, comprising a force sensor receiver (66; Col. 4, lines 3-8) which is stationary relative to the spindle shaft and the brake cable and assigned to the force sensor emitter and which can be in the form of a Hall chip assigned to the magnetic force sensor emitter.

As per claim 7, Arnold et al discloses a setting device according to claim 6, comprising an arrangement of the force sensor receiver as an integrated part of a

Art Unit: 3657

control unit of the setting unit, which can be accommodated by a fixed circuit board (2c; Col. 4, lines 3-8).

As per claim 8, Arnold et al discloses a setting device according to claim 7, wherein the control unit is arranged in the area of the telescopic device (Fig. 1; Col. 4, lines 3-8).

As per claim 9, Arnold et al discloses a setting device according to claim 1, wherein the at least one elastic element is embodied as a spring screw (30).

As per claim 10, Arnold et al discloses a setting device according to claim 9, wherein the at least one elastic element is arranged or embodied as a spring screw surrounding the hollow shaft concentric to the hollow shaft or the spindle shaft in its opposite direction of rotational advance (30).

As per claim 11, Arnold et al discloses a setting device according to claim 1, wherein the at least one elastic element is embodied as a compression spring element (30).

As per claim 13, Arnold et al discloses a setting device according to claim 5, wherein the at least one elastic element is used as a force sensor emitter for determining the brake application force of a motor vehicle parking brake (Col. 2, lines 44-51).

As per claim 14, Arnold et al discloses a setting device according to claim 5, wherein the at least one elastic element is used as a force sensor emitter for determining the brake release force of a motor vehicle parking brake (Col. 2, lines 44-51).

As per claim 15, Arnold et al discloses a setting device according to claim 1, wherein a first elastic element (30) is loaded axially by advancing support for an axial advancing movement of the telescopic device, on application of a motor vehicle parking brake; and wherein a second elastic element (70) is loaded axially in the other axial direction of movement of the telescopic device by advancing support, on release of a motor vehicle parking brake.

As per claim 19, Arnold et al discloses a setting device according to claim 15, comprising an arrangement of the second elastic element axially before or after the first elastic element (70).

As per claim 22, Arnold et al discloses a motor vehicle parking brake (Title), comprising a drive unit (Fig. 1) featuring a remotely-operated drive (50), a telescopic device (8, 36; Col. 4, lines 3-8) movable axially in a housing (2) or similar in a longitudinal axis of the setting unit, containing a hollow shaft (8) and a spindle shaft (36) connected to it in a manner that enables it to rotate and advance and actuate a brake cable (20), a non-rotating axially advancable connection (42a) between the remotely-operated drive and the hollow shaft, and an axially advancing support between the hollow shaft on the one side and the housing on the other side via at least elastic element (30) stationary relative to the spindle shaft and the brake cable during a drive into the release position of the brake of an axially loaded and thereby axially longitudinally deformable elastic element.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 12, 16 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al (US 5,180,038).

As per claim 12, Arnold et al discloses a setting device according to claim 1, but does not disclose wherein at least one elastic element is embodied as a tension spring element. As there are only a few basic types of springs, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the parking brake system of Arnold et al by using a tension spring in lieu of a compression spring in order to improve damping characteristics.

A person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely that product [was] not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103. KSR, 550 U.S. at E, 82 USPQ2d at 1397.

As per claim 16, Arnold et al discloses a setting device according to claim 15. Although Arnold et al illustrates helical clutch spring (70) as being significantly smaller than the main spring (30), they do not explicitly disclose a different elasticity constant of the first elastic element by comparison with the elasticity constant of the second elastic element. It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the helical clutch spring a different elasticity constant than

Art Unit: 3657

the main spring in order to optimally accommodate the significantly different loads exerted on them.

As per claim 21, Arnold et al discloses a setting device according to claim 1, comprising an embodiment of the at least one elastic element as a pressure compression element (30). Although Arnold et al does not disclose different compression spring constants by comparison with the tension spring element constant, it would have been obvious to one of ordinary skill in the art at the time the invention was made to do so if replacing the spring types for improved damping characteristics in order to accommodate the different distances required.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Deutloff et al. (US 7,648,006), Parking brake.
- b. Petrak (US 2003/0227010), Spring actuator.
- c. Kang (US 5,775,469), Dual spring actuator.
- d. Taig (US 5,092,432), Dual spring actuator.
- e. Korthaus et al. (US 3,161,074), Dual spring actuator.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN BOWES whose telephone number is (571) 270-5787. The examiner can normally be reached on M-F 7:30am-5:00pm, alternating Fridays off.

Art Unit: 3657

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/STEPHEN BOWES/
Examiner, Art Unit 3657

/Robert A. Siconolfi/
Supervisory Patent Examiner, Art
Unit 3657